

### **REMARKS**

Claims 1-3 are currently pending. Claim 1 is amended by replacing the term " $\alpha$ -Mn" with "unheated Mn". The amendment is supported by the Specification, which discloses the use of electrolytic manganese without describing any special temperature treatment. No new matter has been added herewith. The following addresses the substance of the Office Action.

#### **Written Description**

Claims 1-3 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, " $\alpha$ -Mn" was found to not be supported by the Specification. As discussed above, the Applicants have amended Claim to delete reference to " $\alpha$ -Mn". Accordingly, removal of the rejection is respectfully requested.

#### **Obviousness**

The Examiner maintained the objection of obviousness of Claims 1-2 over Dremman (U.S. Patent No. 4,171,215). The Examiner also maintained the objection of Claim 3 as obvious over Dremman in view of JP 59-004999A.

Dremman teaches a manganese alloying additive which is prepared by subjecting manganese to a heat treatment of about 1305°F to about 1990°F and rapidly quenched to ambient temperatures with water (see column 2, lines 21-28). The manganese is subsequently crushed into fine particles and mixed with aluminium and compacted in briquettes or pellets.

Dremman teaches that prior to the mixture and compacting of Mn and Al, the Mn must be heat-treated and quenched under water. All of the examples (including Examples 1-3 cited by the Examiner) show that the Mn is heat treated before its grinding and mixing with Al. The sole example where the Mn is not subjected to a heat treatment is Example 6, where a composition of 77% Mn and 23% Al (far removed from the range of 90-98% Mn of present Claim 1) is used as a control.

It is evident from the disclosure of Dremman that the step of heat treatment is an essential step of the process described therein. By following the teachings of Dremman, a skilled person would not dispense with the apparently essential heating step, according to Dremman, to obtain manganese pellets for aluminium bath alloying. Thus, the presently claimed method is not obvious in view of Dremman.

As discussed in the Applicant's previous response to the previous office action, Dremman teaches away from the presently claimed method since Dremman discloses that the essential feature of the method disclosed therein is to heat the Mn on the order of 1305-1990°F, followed by water quenching to obtain  $\beta$ -manganese to be used as such or alloyed as a starting material in order to achieve better dissolution rates of the compacts in the Al bath. Therefore, one skilled in the art, faced to the problem of improving the dissolution rate of manganese in molten aluminium, would have tried to heat Mn to obtain  $\beta$ -manganese, and would have used it in a manganese alloying additive as disclosed in Dremman.

In view of the amendments to Claim 1 and the preceding remarks, Claim 1 is not obvious in view of the cited reference. Claims 2 and 3 are also not obvious by virtue of their dependency on Claim 1.

*No Disclaimers or Disavowals*

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

**CONCLUSION**

It is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

**Application No.:** 10/507,396  
**Filing Date:** September 10, 2004

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: 19 September 2008

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